

IN THE CLAIMS:

Please amend the claims as shown in the following listing of claims, which replaces all prior versions and listings of claims in the application:

1. (Currently amended) A method of refurbishing a deposition target having a pre-sputtered surface with a sputtered depression, the method comprising:
 - (a) providing the pre-sputtered surface of the deposition target comprising the sputtered depression, in a process zone;
 - (b) generating an electrical arc in the process zone;
 - (c) inserting a consumable metal wire into the process zone to form liquefied metal; and
 - (d) directing liquefied metal into the sputtered depression of the deposition target to at least partially fill the sputtered depression with the liquefied metal by injecting a pressurized gas into the process zone to direct the liquefied metal into the sputtered depression of the target to at least partially fill the sputtered depression with the liquefied metal, thereby forming a coating comprising the metal in the sputtered depression.
2. Cancel.
3. (Original) A method according to claim 1 wherein (b) and (c) are performed simultaneously and comprise the step of generating an electrical arc between first and second electrodes, wherein at least one of the first or second electrodes comprises the consumable metal wire.
4. (Currently amended) A method according to claim 1 wherein (b) comprises generating an electrical arc between an electrode and the surface of the deposition target.

5. (Original) A method according to claim 1 wherein the coating comprises at least one of titanium, aluminum, tungsten, tantalum, copper.

6. (Original) A method according to claim 1 wherein the coating comprises at least one of germanium, selenium and tellurium.

7. (Original) A method according to claim 1 wherein the coating comprises a plurality of metals.

8. (Original) A method according to claim 7 wherein the coating comprises aluminum and at least one of (i) from about 0.25% to about 20% by weight of copper, and (ii) from about 0.25% to about 20% by weight of silicon.

9. (Original) A method according to claim 8 wherein (c) comprises inserting a consumable metal wire comprising an aluminum alloy into the process zone.

10. (Original) A method according to claim 7 wherein the coating comprises a chalcogenide material comprising germanium, selenium and tellurium.

11. (Original) A method according to claim 10 wherein (c) comprises inserting a consumable metal wire comprising a chalcogenide alloy into the process zone.

12. (Currently amended) A method according to claim 1 ~~wherein~~ (d) ~~comprises directing liquefied metal onto a portion of the surface of the target to form a metal layer on the surface, and wherein (d) is repeated to form a plurality of metal layers~~ that form the coating in the sputtered depression on the surface.

13. (Currently amended) A method according to claim 12 further comprising exposing the metal layers to an energy source to interdiffuse the metal layers.

14. (Currently amended) A method according to claim 13 wherein the metal layers are heated to a temperature of from about 50°C to about 3000°C.

15. (Original) A method according to claim 12 wherein the plurality of metal layers comprises at least one aluminum layer and at least one copper layer, and wherein the aluminum and copper layers are heated to form an interdiffused layer comprising from about 0.25% to about 20% by weight of copper.

16. (Original) A method according to claim 12 wherein the plurality of metal layers comprises at least one layer having a chalcogen metal, and wherein the plurality of layers are heated to form an interdiffused layer comprising a chalcogenide material.

17. (Original) A method according to claim 16 wherein the chalcogenide material comprises germanium, selenium and tellurium.

18. (Currently amended) A method according to claim 1 further comprising:

(e) exposing the surface of the deposition target to an energy source to recrystallize the metal on the surface.

19. (Original) A method according to claim 18 wherein (e) comprises heating the surface to a temperature of from about 50°C to about 3000°C.

20. (Original) A method according to claim 18 wherein (e) comprises directing an electromagnetic energy beam onto the surface to recrystallize the metal.

21. (Currently amended) A method according to claim 18 further comprising:

(f) machining the surface of the deposition target to provide a predetermined target thickness.

22. (Currently amended) A method according to claim 21 further comprising cleaning the surface of the deposition target to remove machining residues.

23. (Original) A method according to claim 22 comprising cleaning the surface with a cleaning solvent.

24. (Currently amended) A method of refurbishing a deposition target having a pre-sputtered surface with a sputtered depression, the method comprising:

- (a) providing the pre-sputtered surface of the deposition target comprising the sputtered depression, in a process zone;
- (b) generating an electrical arc in the process zone between first and second electrodes by applying a voltage to the electrodes, at least one of the first and second electrodes comprising a consumable metal wire, thereby at least partially liquefying the consumable metal wire to form liquefied metal; and
- (c) directing liquefied metal into the sputtered depression of the deposition target to at least partially fill the sputtered depression with the liquefied metal by injecting a pressurized gas into the process zone to direct the liquefied metal into the sputtered depression of the target to at least partially fill the sputtered depression with the liquefied metal, thereby forming a coating comprising the metal in the sputtered depression.

25. Cancel.

26. (Original) A method according to claim 24 wherein the consumable metal wire comprises at least one of titanium, aluminum, tungsten, tantalum and copper.

27. (Original) A method according to claim 24 wherein the consumable metal wire comprises at least one of germanium, selenium and tellurium.

28. (Currently amended) A method of refurbishing a deposition target having a pre-sputtered surface with a sputtered depression, the method comprising:

(a) providing the pre-sputtered surface of the deposition target comprising the sputtered depression, in a process zone;

(b) generating an electrical arc in the process zone between the surface of the target and a consumable metal wire by applying a voltage to the target and the consumable metal wire, thereby at least partially liquefying the consumable metal wire in the process zone to form a liquefied metal; and

(c) directing liquefied metal into the sputtered depression of the deposition target to at least partially fill the sputtered depression with the liquefied metal by injecting a pressurized gas into the process zone to direct the liquefied metal into the sputtered depression of the target to at least partially fill the sputtered depression with the liquefied metal, thereby forming a coating comprising the metal in the sputtered depression.

29. Cancel.

30. (Original) A method according to claim 28 wherein the consumable metal wire comprises at least one of titanium, aluminum, tungsten, tantalum and copper.

31. (Original) A method according to claim 28 wherein the consumable metal wire comprises at least one of germanium, selenium and tellurium.

32. (Currently amended) A method of refurbishing a deposition target having a pre-sputtered surface with a sputtered depression, the method comprising:

- (a) providing the pre-sputtered surface of the deposition target comprising the sputtered depression, in a process zone;
- (b) generating an electrical arc in the process zone between the surface of the target and an electrode by applying a voltage to the target and the electrode;
- (c) inserting a consumable metal wire into the process zone to at least partially liquefy the consumable metal wire in the process zone to form liquefied metal; and
- (d) directing liquefied metal into the sputtered depression of the deposition target to at least partially fill the sputtered depression with the liquefied metal by injecting a pressurized gas into the process zone to direct the liquefied metal into the sputtered depression of the target to at least partially fill the sputtered depression with the liquefied metal, thereby forming a coating comprising the metal in the sputtered depression.

33. Cancel.

34. (Original) A method according to claim 32 wherein the consumable metal wire comprises at least one of titanium, aluminum, tungsten, tantalum and copper.

35. (Original) A method according to claim 32 wherein the consumable metal wire comprises at least one of germanium, selenium and tellurium.

36. (Currently amended) A method of refurbishing a deposition target having a pre-sputtered surface with a sputtered depression, the method comprising:

- (a) providing the pre-sputtered surface of the deposition target comprising the sputtered depression, in a process zone;
- (b) generating an electrical arc in the process zone between the surface of the sputtering target and an electrode by applying a voltage to the target and the electrode;
- (c) passing the electrical arc through a nozzle to form a plasma jet in the process zone;
- (d) directing liquefied metal into the sputtered depression of the deposition target to at least partially fill the sputtered depression with the liquefied metal by inserting a consumable metal wire into the process zone to at least partially liquefy the consumable metal wire in the process zone to form liquefied metal that is directed into the sputtered depression of the deposition target by the plasma jet to at least partially fill the sputtered depression with the liquefied metal, and
- (e) injecting a pressurized gas into the process zone to reduce contamination of the liquefied metal from the environment.

37. Cancel.

38. (Original) A method according to claim 36 wherein the consumable metal wire comprises at least one of titanium, aluminum, tungsten, tantalum and copper.

39. (Original) A method according to claim 36 wherein the consumable metal wire comprises at least one of germanium, selenium and tellurium.

40. (Original) A method according to claim 36 wherein the electrode comprises the consumable metal wire.

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